Journal of Orthopedics Research and Rehabilitation

Case Report

DOI: 10.51271/JORR-0019

Our treatment approach in a super obese patient with lipedema: a case report lipedema

Artuner Varlıbaş[1], Şeyma Kılıç[2], Aydın Çifci[1]

[1]Department of Internal Medicine, Faculty of Medicine, Kırıkkale University, Kırıkkale, Turkey
[2]Phase IV, Faculty of Medicine, Kırıkkale University, Kırıkkale, Turkey

Received: 24/07/2023 ◆ **Accepted**: 15/10/2023 ◆ **Published**: 30/10/2023

Corresponding Author: Artuner Varlıbaş, artunervarlibas@gmail.com

ABSTRACT

Conditions that cause edema in the lower extremities are frequently seen in the community. When it is bilateral, conditions such as heart failure, kidney failure, nephrotic syndrome, etc. usually come to mind. Lipedema, which should be considered in order to make a diagnosis, is more common than expected. Lymphedema and lipedema are often delayed in diagnosis and are progressive disorders. Lipedema is a disease that is frequently seen in women, results in fat accumulation in the extremities and especially in the legs, the origin of which has not been fully resolved, and has a hereditary role. The reason why it is frequently seen in women is thought to be the possibility of women being estrogen dependent. Another trigger is obesity. Although its prevalence in the general female population is reported to be around 10%, the cause of lipedema is still unknown. Increasing awareness among physicians about this condition will facilitate diagnosis. With this case report, we wanted to draw attention to the increasing incidence of lipedema due to obesity and many factors.

Keywords: Super obesity, lipedema, lipedema treatment, edema, circulatory disorder, diuretics, antidiabetics

INTRODUCTION

The prevalence of obesity is increasing all over the world. In patients who come with excess weight, it is generally thought that this situation is only related to weight. In these patients, there may be excess weight due to widespread edema in the whole body. This excessive edema is caused by heart, kidney failure, etc. As it may be due to conditions such as hypothyroidism, hard, non-pitting edema, and sometimes lymphedema due to lymphatic circulation problems. Lipedema, which is often overlooked and should be considered in order to make a diagnosis, is more common than expected. The cause of lipedema is still unknown, although its estimated prevalence in the general female population is around 10%. Increasing awareness among physicians about this condition will facilitate diagnosis.[1-3]

Lipedema is a disease of unknown origin, which is frequently seen in women, resulting in fat accumulation in the extremities and especially in the legs. It is suggested that the reason why it is frequently seen in women is the possibility of being estrogen dependent. There are only a few cases of male gender in the literature. Impaired lymphatic microcirculation, microangiopathy, altered adipogenesis are the presumed causes of the disease. It is thought that the disease may be of hormonal origin, since the incidence of the disease is high during the periods of major hormonal changes. Hereditary factors are also included in its etiology.[1,4-6]

Lipedema is not usually considered; For this reason, it is misdiagnosed, delays in diagnosis, and missed diagnosis.[1] With this case report, we aimed to both convey our experience in the treatment approach of super-obese and lipedema patients, and increase awareness among physicians about lipedema.

CASE

A 59-year-old, menopausal female patient, who gave birth to 7 children, applied to our polyclinic with the complaints of her excess weight restricting her movement and pain in her knees due to weight. Other complaints of the patient were pain while walking, leg swelling after exertion and increased with inactivity, and a throbbing headache. Known diseases of the patient were noted as hypertension, Chronic obstructive pulmonary disease (COPD), cataract. The patient had a history of cerebral edema and recurrent infection requiring hospitalization for 20-25 days per year. He was actively using antihypertensive, anti-thrombolytic, inhaler bronchodilator and PPI. Extensive laboratory tests were planned from the patient at the time of presentation. Complete blood count was within normal limits. Kidney and liver function tests and electrolyte measurements were

Cite this article: Varlıbaş A, Kılıç Ş, Çifci A. Our treatment approach in a super obese patient with lipedema: a case report lipedema. *J Orthop Res Rehabil.* 2023;1(4):86-88

This work is licensed under a Creative Commons Attribution 4.0 International License.

normal. C-reactive protein (CRP) was found to be 19.7 mg/L (normal range 0-5 mg/L) and there was no sign of infection on examination. Other notable non-reference values were: lactate dehydrogenase (LDH) 271 U/L (normal values 0-250U/L), fibrinogen 5.07 g/L (normal values 1.8-3.5 g/L), D-dimer 1209 µg/dl (normal range 0-550 µg/L). Necessary additional evaluation was made regarding these tests and no additional underlying pathology was detected.

The body mass index (BMI) of the patient with a height of 152 cm and a body weight of 156 kg was calculated as 67.5 kg/m². In the physical examination of the patient who was super obese (BMI>50 kg/m²), it was observed that the weight was mainly in the extremities -especially the legs- and there was widespread adiposity throughout the body. In line with her complaints, while the drugs used by the patient were rearranged, additional drug therapy was recommended to the patient in order to reduce the body mass index to normal levels and to increase the patient's life standards. It was aimed to reduce edema with diuretic and antidiabetic (metformin+empagliflozin) added to the treatment, and to decrease appetite with GLP-1 receptor agonist (exenatide). The patient's adherence to treatment was high; at the end of the first month, it was observed that he lost 10 kg in the control, his complaints decreased, and the treatment was beneficial.

Figure. The development of case: a, b before treatment; c, d a month later

CASE 2

A 55-year-old female patient, who gave birth to 2 children, underwent parathyroidectomy; he was admitted to our outpatient clinic for control after parathyroid surgery and with complaints of swelling in the legs and edema increasing with effort. Other complaints of the patient were weakness, tingling in the tips of the toes, frequent headaches, and intestinal motility disorders. Known diseases of the patient were noted as osteoarthritis of the kneecaps, herniated disc, parathyroid tumor, and major depression. He was actively using antidepressant, anti-thrombolytic, antihypertensive, antidiabetic, antihyperlipidemic and synthetic thyroid hormones. Large-scale blood tests were studied for pre-treatment control. Leukocytosis was found to be 10.23 X 109/L (normal limits 4-10 X 109/L) in the complete blood count. Sedimentation was seen as 35 mm/h, CRP 6.2 mg/L (0-5 mg/L). An examination for infection was performed and infection was excluded. Urea was 45 mg/dl (normal ranges were 17-43mg/dl), creatinine was 0.96 mg/dl, and eGFR was 67. Triglyceride was 165 mg/dl, T4 and T3 were within normal limits, while TSH was 5.915.91 IU/ml (0.27-4.2 5.91 IU/ml). Other than these, liver function tests, electrolytes, hormone and vitamin tests were normal. The patient's height was 155 cm and body weight were 110 kg, and BMI was calculated as 45.8 kg/m². In the physical examination of the patient, who was classified as morbidly obese, it was observed that the excess weight was collected, especially in the lower extremities and the presence of edema in the whole body. While the medications used by the patient were rearranged in line with her complaints, additional drug treatment was recommended to reduce the BMI value to normal levels and to increase the patient's life standards. It was aimed at reducing edema and appetite with diuretics, antidiabetics (metformin+empagliflozin) and exenatide added to the treatment. In the control examination and tests, the results showed that the compliance with the treatment was good. It was observed that the patient lost 5 kg in the 1st month follow-up, the edema that increased with effort decreased, and the response to the treatment was good.

DISCUSSION

Lipedema is a disease whose origin has not yet been fully explained. Patients usually present the first finding during periods of hormonal change. Its specific finding is an imbalance of body fat distribution. In these patients, there is a fat accumulation occurs in the extremities, especially in the legs. Significant weight gain is observed in patients. Often, this situation affects daily activities, causes heaviness in the body, leg pain, and causes the patient to consult a doctor. Circulation and adipogenesis disorders, which are thought to be the cause of the disease, and hormone changes are being investigated. It is considered that genetic factors may also be predisposing.[7] Since the etiology has not been fully resolved yet, there is no cure in the literature. Therefore, treatments such as drug treatments (diet, diuretics, tight stockings, rest and elevation, and massage), intermittent pneumatic compression, liposuction and, in some patients, surgery, etc. are applied in these patients.[6] Since the treatments we come across are usually surgical-based, patients may be hesitant to be treated. It is possible to get more pronounced positive results with surgical treatments; however, weight control is not usually at the forefront in surgical treatments for lipedema. In terms of being an alternative treatment, the patient's compliance with the drug treatment is high. Patients may not recover completely with these drug treatments, but it is not possible to recover completely with surgical treatments.[1,2,4-9]

Szolnoky et al.[9] found that edema and weight-reducing treatment for lymphedema increased capillary circulation, reduced leg pain and improved symptoms in patients with lipedema and lymphedema.

Weight-loss drugs have provided similar benefits. With

drug treatments, symptoms decrease, lymphedema decreases, and a better and relatively acceptable image appears in a significant part of the patients visually.[6-12]

A significant amount of weight loss and physical relief can be satisfied in patients who are older, who do not have much cosmetic expectation, and who want to relax more in terms of health, and these patients can be satisfied with surgery, etc. There is no need for you to go into different searches. As a matter of fact, in the cases we presented, our treatment approach focusing on edema and weight loss provided clinical benefit to the patients without the need for surgery.

CONCLUSION

Lipedema is often confused with lymphedema or other causes of edema and overlooked; However, with the correct diagnosis, the standard of living of the patients can be increased significantly. Although there is no cure for lipedema yet, symptomatic treatments can reduce the complaints of patients. The effectiveness of treatment can also be increased by encouraging patients to lose weight. Weight control and drug treatments for reducing edema, if any, are important approaches in terms of lipedema, as it is an alternative to surgical treatments and has high compliance. Therefore, before making the surgical decision, the patient should be evaluated in terms of drug therapy. The drugs used are promising in terms of side effects and prevention of recurrence. The patients we follow are mostly middle-advanced aged and are at risk in terms of anesthesia. Medication; It is a safer option than surgical treatments and liposuction. For this reason, we think that it would be more appropriate to take approaches to control weight and edema in patients with drug treatments, and to start other treatments if necessary.

ETHICAL DECLARATIONS

Informed Consent: Written informed consent was obtained from all participants who participated in this study.

Referee Evaluation Process: Externally peer-reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

Author Contributions: All of the authors declare that they have all participated in the design, execution, and analysis of the paper and that they have approved the final version.

REFERENCES

1. Wagner S. Lymphedema and lipedema–an overview of conservative treatment. *Vasa*. 2011;40(4):271-279.
2. Rabe E, Carpentier P, Maggioli A. Understanding lower leg volume measurements used in clinical studies focused on venous leg edema. *Int Angiol*. 2018;37(6):437-443.
3. Suehiro K, Morikage N, Murakami M, et al. A study of leg edema in immobile patients. *Circulation J*. 2014;78(7):1733-1739.
4. Bertlich M, Jakob M, Bertlich I, Schift R, Bertlich R. Lipedema in a male patient: report of a rare case–management and review of the literatüre. *GMS Interdiscip Plast Reconstr Surg DGPW*. 2021;10:Doc11. doi:10.3205/iprs000161
5. Kruppa P, Georgiou I, Biermann N, Prantl L, Klein-Weigel P, Ghods M. Lipedema-pathogenesis, diagnosis, and treatment options. *DtschArztebl Int*. 2020;117(22-23):396-403. doi:10.3238/arztebl.2020.0396
6. Greer KE. Lipedema of legs. *Cutis*. 1974;14(1):98-100.
7. Ernst AM, Bauer H, Bauer HC, Steiner M, Malfertheiner A, Lipp AT. Lipedema research—quo vadis? *J Personalized Med*. 2022;13(1):98.
8. Child AH, Gordon KD, Sharpe P, et al. Lipedema: an inherited condition. *Am J Medl Genet Part A*. 2010;152(4):970-976.
9. Szolnoky G, Varga E, Varga M, Tuczai M, Dosa-Racz E, Kemény L. Lymphedema treatment decreases pain intensity in lipedema. *Lymphology*. 2011;44(4):178-182.
10. Gomez-Peralta F, Abreu C, Lecube A, et al. Practical approach to initiating SGLT2 inhibitors in type 2 diabetes. *Diabetes Therapy*. 2017;8:953-962.
11. Rossitto G, Delles C. Does excess tissue sodium storage regulate blood pressure? *CurrHypertens Rep*. 2022;24(5):115-122.
12. Christofides EA, Gonzalez-Campoy JM. Adiposopathy. *Bariatric Endocrinol*. 2019:99-120.